## Suggestions for Use

- Read the first page titled "Everything You Wanted to Know About Protists" together as a class. You could have students read in partners or 'popcorn read'--this is where one students reads a certain amount of text then says "POPCORN TO..." and can call on any student with their hand up to read the next amount of text.
- After building this background together, students could read about each type of protist and fill in the graphic organizer. This will help guide their comprehension and make comparisons about each microorganism.
- You could also assign students to groups to read about one type of protist, then create a presentation to share what they learned with the class.
  - Students could be grouped by counting off by threes (the protists are numbered—1. Amoeba 2. Paramecium 3. Euglena)
  - You could also have students "pick a card" to determine their groupings. Just print the grouping cards, cut out, put in a bin, and let students pick.
- Or you could set up rotations, where students read about one protist, fill out the chart, then move to a different designated spot in your room to read about the next.
- To help complete the graphic organizer (and motivate students) have them go to each website listed to learn more.
- If you have access to a student server, you could save this file there so that students could easily click on the websites.





# Like What You See?

### Check Out My Other Classroom Resources! Find me on:

TpT: https://www.teacherspayteachers.com/Store/Ms-Sewells-Class

Blog: http://mssewellsclass.blogspot.com

Facebook: https://www.facebook.com/MsSewellsClass/

Pinterest: https://www.pinterest.com/mssewellsclass

Instagram: https://www.instagram.com/mssewellsclass/

All material in this packet is OSarah Sewell. If sharing with other teachers, please buy additional, discounted licenses through TpT. If you are buying for a school district, please email me at <u>sarah.sewell.tpt@gmail.com</u> for discount information. Thank you!

A BIG Thank You to Graphics by:





http://www.graphicsfactory.com/

Mς

Sewel

http://www.teacherspayteachers.com/Store/Krista-Wallden

### Everything You Wanted to Know About Protists

Today we're going to be learning about a new kingdom,



We, as humans, are made of trillions of cells! That's 1,000,000,000,000s! Wow!

One is the loneliest number...

Organisms in the protist kingdom, on the other hand, only have **one** cell. That makes them very, very tiny. In fact, they are microscopic. We call them **microorganisms**.

A cell can perform all of the activities that make something alive, but what are those things that all living things do?

#### ALL LIVING THINGS:

- 1) get food
- 2) digest food
- 3) get rid of waste
- 4) move
- 5) use oxygen
- 6) reproduce

#### **CELL BASICS**

A **cell** is the smallest unit of life. This means it's the smallest thing that can carry out all of the main functions of life.

The parts that the cell needs to do this are called organelles. All protozoans have three main organelles:

> Nucleus- This is the cell's "brain." It has all the information the cell needs to function and reproduce.

> **Cell Membrane**- This gives the cell its shape. It controls how oxygen, carbon dioxide, food and waters move in and out of the cell.

**Cytoplasm**- This is a jelly-like material inside of the cell. It has **vacuoles**, which look like bubbles, which help with the digestion of food.

Protists do those same 6 things.

Now you are ready to learn about three organisms in the Protist Kingdom.

### 1. Amoeba

The picture shows an amoeba. They have no definite shape. What's that mean?

Imagine 10 students standing in a circle, with a rope tied around them:



Now, imagine that one section of the circle starts walking in one direction. What happens to the shape?



If the rope is tight, the other people will have to move if one side moves. This is how an amoeba moves - one side is pushed out and then the other follows.

When one side of the amoeba moves, **pseudopods** (sounds like suedo-pods) are formed. These pseudopods help the amoeba pull in food. When they get to food, they surround it and slowly bring it into the cell. The food gets closed into a **food vacuole** and digested. Waste exits through a vacuole. The amoeba keeps moving and its waste is left behind.

How does it reproduce? Two words: **binary fission**. This means they split in half.

Amoeba live in fresh water, salt water, damp soil, and in the bodies of other animals.



### 2. Paramecium



The pictures shows a paramecium. Do you notice any difference from the amoeba? Unlike amoeba, paramecium have a definite shape.

Paramecium is actually sometimes called the "slipper paramecium" because it is shaped like the sole of a shoe.



Parameciums have 2 nuclei (that's the plural form of nucleus). Let's look at what these and the other organelles do in a paramecium.



Whew! That's a lot of information. Now you should know how a paramecium eats, gets rid of wastes, moves, and performs its other life functions. Just like an amoeba, a paramecium reproduces through binary fission.

Paramecium live in water. If you look at a drop of pond water, you may find some.

Visit these websites

to find out more:

- www.mcwdn.org/Animals/Paramecium.html
- www.microscope-microscope.org/applications/pond-critters/protozoans/ ciliphora/paramecium.htm



### 3. Euglena

From this picture you can observe a couple of different things about euglena. First of all, it can be green. This is because it contains **chloroplasts** which have **chlorophyll**, just like plants. This means that euglena can make its own food.

You may be thinking that that doesn't sound like an animal characteristic. And you're right. Euglenas actually have traits of both plants and animals.

Even though it can make its own food, euglena can actually move to food too. To do this, it uses a **flagellum**. This is the string attached to the animal that looks like a tail.



Near the tail you can see a hole. That is the euglena's mouth. When they ingest (take in) food, they store it in vacuoles. Then they release their waste through another vacuole sack.

The blue eyespot near this hole is actually the nucleus. Just like in the other cells, this is the control center for the whole cell.

Like the amoeba and paramecium, euglena reproduce through binary fission.

They typically live in fresh water or soil, from which they can take oxygen.



Name \_\_\_\_\_

**Directions:** While reading about each PROTIST, fill in the graphic organizer to show how it fulfills the characteristic of a living thing.

Name of Protist:		
Gets food		
Digests food		
Gets rid of waste		
Moves		
Oxygen		
Reproduces		(c) Sarah Sewell